REPORT RESUMES

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THE IMPACT OF NEWSPAPER NOTICE ON EDUCATIONAL TELEVISION BEHAVIOR. EDUCATIONAL TELEVISION PROJECT, PRELIMINARY REPORT 6.

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RESEARCH WAS DIRECTED TOWARD DETERMINING THE EFFECT OF REPEATED EXPOSURE TO NEWSPAPER PUBLICITY CONCERNING EDUCATIONAL TELEVISION ON (1) ATTITUDES TOWARD EDUCATIONAL TELEVISION AND (2) VIEWING BEHAVIOR RELATIVE TO EDUCATIONAL TELEVISION. THE SAMPLE CONSISTED OF 329 PERSONS TAKEN FROM A LARGER SAMPLE USED IN THE STUDY OF RESISTANCES TO EDUCATIONAL TELEVISION. APPROXIMATELY 70 QUESTIONS WERE ADMINISTERED THROUGH PERSONAL INTERVIEWS. FOUR GENERAL AREAS WERE INVESTIGATED--(1) DEMOGRAPHIC CHARACTERISTICS OF VIEWERS, (2) VALUE PATTERNS, (3) BEHAVIOR PATTERNS, AND (4) DECISION-MAKING PATTERNS ABOUT TELEVISION VIEWING. FOR THE FIRST SET OF INTERVIEWS (FEBRUARY-MARCH 1960) THE LIST OF NAMES COMPRISING THE SAMPLE WAS GIVEN TO A SURVEY RESEARCH ORGANIZATION. FOLLOWUP PROCEDURES WERE CARRIED OUT AGAIN BY PROFESSIONAL INTERVIEWERS. THE SECOND SET OF INTERVIEWS WAS CONDUCTED DURING THE LATTER PART OF APRIL 1961, USING GRADUATE STUDENTS AS INTERVIEWERS. THE BASIC PROBLEM IN ANALYSIS WAS TO ISOLATE THE EFFECT OF FOUR VARIABLES ON ATTITUDES TOWARD EDUCATIONAL TELEVISION--(1) THE SUBJECTS' LEVEL OF EXPOSURE TO NEWSPAPER INFORMATION, (2) EFFECTS OF A DIRECT MAIL CAMPAIGN, (3) EFFECTS OF THE FIRST INTERVIEW, AND (4) THE PERIOD OF TIME BETWEEN THE FIRST AND SECOND INTERVIEWS. RELATED REPORTS ARE ED 003 242, ED 003 243, AND ED 003 641 THROUGH ED 003 645. (JC)

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EDUCATIONAL TELEVISION PROJECT

PRELIMINARY REPORT NUMBER SIX

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The Impact of Newspaper Notice on Educational Television Behavior

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CHAPTER I

INTRODUCTION AND BACKGROUND OF THE PROBLEM

The advent of television in 1948 revived all the enthusiastic hopes for educational broadcasting which had flourished in the early days of radio. These hopes were eloquently expressed by Milton Eisenhower, then co-chairman of the National Citizens' Committee for Educational Television:

> . . . we can develop the educational and commercial opportunities of television as complementary partners, as associates in one of the grandest opportunities any group of men or women ever had to provide intellectual leadership. With faith in each other, with vision born of understanding, we can give a television service which will meet the needs and fulfill the obligation we can neither shirk nor delegate to others.[1]

What Eisenhower and the other members of the committee envisioned was a "second service" for television which would supplement the commercial broadcasting schedule: a television service free of the programming limitations imposed upon commercial telecasters by the economic pressures which are an integral part of a highly competitive, profit-motivated, advertising-supported system of broadcasting.

In general terms this second service was envisioned as having a dual function:

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[1] Jennie Waugh Callahan, Television in School, College, and Community (New York: McGraw-Hill, 1953), p. vi.

(1) To extend the boundaries of the classroom, to multiply the effectiveness of the outstanding teacher, and to enrich the curriculum through in-school broadcasts of a formal and overtly instructional nature, so scheduled and integrated with a public school curriculum as to supplement regular classroom instruction.

(2) To serve educational needs of the general adult population through broadcasts varying from programs of a formal instructional nature, such as "telecourses" through which the qualified viewer may gain college credit, to programs of informal cultural and informational material.

In 1950 the Joint Committee on Educational Television (JCET) was formed, representing eight national educational organizations, to press the educator's case for a second service in the field of television. The educational interests were well organized and presented their case effectively at the 1951 hearings of the Federal Communications Commission. As a result the FCC's Sixth Report and Order designated 242 channels (80 VHF and 162 UHF) as noncommercial and stipulated that licenses for these channels be granted only to, "Non-profit educational organizations upon a showing that the proposed stations will be used primarily to serve the educational needs of the community; for the advancement of educational programs; and to furnish a non-profit television broadcast service."[1]

With these channels reserved, educators moved quickly to take advantage of the new medium's potential. Through the efforts of the JCET, the National Association of Educational Broadcasters, the National Citizens' Committee, and numerous local, civic, and educational groups, funds were obtained to underwrite the costs of construction and initial operation of educational television stations. The first such station, KUHT-TV, Houston, Texas, began broadcasting in May, 1953. Within the two-year period following the start of educational station licensing there were ten educational television stations in operation in the United States.[2] By late 1959 television's second service could boast forty-five active, non-commercial stations throughout the country.[3]

After almost a decade of operation the most pressing problem facing educational television is that of financial support. The costs of television station operation are extremely high. In its investigations The National Citizens'

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[1] FCC Rules and Regulations 3.621 (a). Under certain circumstances municipalities also may be licensees.

[2] Joint Council on Educational Television, "Two Years of Progress in Educational Television" (Washington, D.C., September, 1954), (Mimeographed).

[3] Wilbur Schramm (ed.), The Impact of Educational TV (Urbana, Illinois: University of Illinois Press, 1960), p. 3.

Committee estimated the initial building and equipment cost for an educational station as between $250,000 and $400,000, depending upon local conditions and the size of the geographic area to be served. For the operating budget, which depends upon such variables as the hours the station is on the air, staff salaries, power, equipment upkeep, and so forth, the committee places a figure of between $150,000 and $175,000 as the yearly minimum.[1]

The initial costs of construction of educational television stations so far have been met through a variety of means: (1) grants from foundations, (2) gifts from business and industry, (3) contributions from the audience, and (4) taxes. Funds for long term operation present a more complex problem, however. The foundations are chiefly interested in "priming the pump," not in supplying operating funds over an indefinite period of time. Industry support has been spotty and irregular. On the basis of experience there seems little hope that the educational television station's expenses can be met entirely by voluntary contributions from its audience. It seems probable, then, that the long-term support of the second service will have to come from taxes in one form or another.

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[1] Callahan, op. cit., p. 18.

The use of tax monies to support the educational television service demands that such expenditures be justified in terms of the value of the service to the community at large. Accordingly, the educational television station is obliged to meet the needs of a larger number of people.

> Even educational broadcasting is a mass medium, at least to this extent: when it costs more per audience member to maintain the service than it would cost to communicate the same material by more conventional means (e.g., films, visiting lecturers, house visits by teachers, radio rather than television), the educational station can no longer be justified economically. It would be difficult, perhaps, to reduce relative costs to a formula which would permit an accurate comparison but it is obvious that an educational television station which cost up to a half million dollars to construct and in addition costs several hundred thousand dollars a year to operate cannot justify its existence by appealing to only a few hundred people at a time. Even taking into consideration the cumulative size of audiences (which educational broadcasting must do), the audience for each program must be relatively large.[1]

At the present time, the audience for educational television is small. Schramm estimates that only about 10 per cent of the total potential audience makes any use of the educational service in a given week.[2] This figure is an average based on an Audience Research Bureau study of the audiences of forty out of the forty-five educational television stations in the country in late 1959. Even this figure may be unrealistically high. Surveys of the audiences of individual stations indicate that a small cluster of very popular (at least by the standards of educational television) stations tend to bias the average toward the upper end of the scale. Station KQED-TV, San Francisco, for example, enters each week into 18 to 20 per cent of Bay Area homes.[1] In Houston 21 per cent of the potential educational television viewers reported watching two or more programs on KUHT-TV during the test week.[2] In Minneapolis and St. Paul 25 per cent of the potential audience watched two or more programs on KTCA-TV during the week.[3] A survey of the audience of station WQED-TV, Pittsburgh, reported that 52 per cent of the potential audience watched at least once a week although this very high figure may arise from a bias of time and sample.[4]

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[1] Sydney Head, Broadcasting in America (Boston: Houghton Mifflin Co., 1956), p. 409.

[2] Schramm, op. cit., p. 21.

The above figures are measures of the cumulative audience of educational television: the number of viewers who by design or accident tune their sets to the educational channel at least once in any given week. A glance at the ratings of individual educational television programs provides another measure of the audience of the educational service. By the best estimates, the average program on educational television is seen by 1 to 5 per cent of the potential audience.[1]

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[1] Wilbur Schramm, The Audience for Educational Television in the San Francisco Bay Area (Stanford: Stanford University Press, 1957).

[2] R. I. Evans, Examination of Various Demographic and Psychological Characteristics of the Audience, cited in Wilbur Schramm, The Impact of Educational TV, op. cit., p. 21.

[3] W. A. Mindak, Community Reaction to Educational Television, cited in Wilbur Schramm, The Impact of Educational TV, op. cit., p. 21.

[4] Wilbur Schramm, The Impact of Educational TV, op. cit., p. 21.

From the above it should be apparent that if educational television is to realize its full potential as a medium of public service and justify the use of public funds for its support, it must actively seek ways and means of serving a larger share of the public.

The general problem is thus seen as one of fostering public awareness of the educational television broadcasting service and generating favorable public interest in its program offerings to the end that the educational service will attract a larger viewing audience.

There are, generally speaking, two approaches to the problem. The first lies in experimentation with changes in

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[1] *Ibid*., p. 22.

programming and production techniques in an effort to make educational television more appealing to the average viewer without compromising educational objectives and ideals. A few researchers have tended in this direction, notably, Shettler,[1] Sokol,[2] and MacLean, et al.[3] It is felt that these studies, while probably not conclusive in their findings, have at least established a starting point for exploration in this area of the problem. It is anticipated that the research now being conducted at the University of Oregon under a Title VII grant of the National Defense and Education Act will shed further light on this area. A specific segment of that project is concerned with assessing the effects of program structure upon viewing behavior and attitudes.[4]

The other approach lies in research into methods of stimulating public awareness of the educational television service and fostering favorable public interest in the programs being broadcast at the present time. Little research has been undertaken in this direction. The Educational Television Project now in progress at the University of Oregon is concerned not only with an investigation of the factors which influence attitudes and viewing behavior with regard to educational television, but also aims at some investigation into the methods by which attitudes and viewing behavior may be changed.[1]

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[1] D. J. Shettler, "Multiple Evaluation of Films Selected from Educational Television Music Series," cited by Wilbur Schramm, The Impact of Educational TV, op. cit., p. 113.

[2] Robert Sokol and Kent Geiger, "Educational Television in Boston," cited by Wilbur Schramm, The Impact of Educational TV, op. cit., pp. 39-67.

[3] Malcolm S. MacLean, Jr., Edgar Crane, and Donald Kiel, "What Makes an ETV Program Series Interesting?" cited by Wilbur Schramm, The Impact of Educational TV, op. cit., pp. 77-112.

[4] J. R. Shepherd and T. M. Scheidel, "A Sequence of Research Designs Relating Program Structure to Resistance to ETV," Preliminary Report No. 3 (University of Oregon, 1961). (Mimeographed).

There are several channels through which an educational television station may seek to influence its potential audience toward more favorable attitudes and increased utilization of its educational service. A comprehensive list would include the following alternatives:

(1) Personal contact
    (a) face to face
    (b) telephone
(2) Direct mail
(3) Mass media (including television, radio, magazines, and newspapers)
(4) Lecture or public speech
(5) Handouts or pamphlet distribution

Of the alternatives listed above, the newspaper is by far the most heavily used channel of disseminating information about the educational television service to the general public. As noted by Sanderson,[1] Sulzer,[2] and Petry,[3] a heavy schedule of newspaper information is commonly considered the foundation of an educational television station's information and publicity program.

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[1] Marshall N. Goldstein, John R. Shepherd, and Walter T. Martin, "Educational Television Project," Preliminary Report No. 1 (University of Oregon, 1960). (Mimeographed).

It would be reasonable to expect, then, that there should already exist a fairly comprehensive body of knowledge with regard to the effects of such newspaper publicity on attitudes and viewing behavior. Such a body of knowledge does not in fact exist. Its absence presents an opportunity for research, arising, as Whitney puts it," . . . out of recognized need to clear up a status of doubt and uncertainty, caused by a feeling that a blind alley or a blocked path confronts human experience."[4]

In answer to this need, the present study seeks to explore the effects of newspaper information regarding educational television on the attitudes and viewing behavior of the general public.

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[1] Richard A. Sanderson, "Public Relations in Educational Television," Journal of Broadcasting, II, No. 4 (1958), pp. 329-334.

[2] Elmer G. Sulzer, "Educational Broadcasting and Public Relations," NAEB Journal (February, 1959), pp. 6 ff.

[3] Thomas Petry, "On Blowing One's Own Horn--A Practical Exercise in Promotion," NAEB Journal (March-April, 1960), pp. 37 ff.

[4] Frederick Lawson Whitney, The Elements of Research (New York: Prentice-Hall, Inc., 1947), p. 18.

Chapter I has undertaken to set forth some of the broad dimensions of the problem, with emphasis on the need for a more specific investigation into the effects of newspaper information concerning educational television on attitudes and viewing behavior.

Chapter II will elaborate the problem involved in the present study and will review the literature applicable to it.

Chapter III will be concerned with the methodology employed in the execution of the study. The techniques of measurement will be discussed, together with the procedures for collecting the raw data.

Chapter IV will include the presentation and interpretation of data. The statistical treatment of the raw scores will be explained and presented in tabular and graphic forms.

Chapter V will contain the summary, conclusion, and implications for further study.

CHAPTER II

DISCUSSION OF THE PROBLEM

Statement of the Problem.--It is the purpose of this study to determine (1) the effect of repeated exposure to newspaper publicity concerning educational television on attitudes toward educational television, and (2) the effect of repeated exposure to newspaper publicity concerning educational television on viewing behavior relative to educational television.

Significance of the Problem.-- At this point one might argue that even if the problem is not treated specifically in the literature, it is a well demonstrated fact that exposure to mass communications does have an effect on attitude and behavior. Wright responds to the argument in this way:

> Of course, the media affect the public. We know this from common observation and from a wealth of systematic research evidence. After all, one's perception of the world around serves to guide many of his opinions and much of his behavior. And in modern societies a large part of the picture of the world comes through mass communications. But the danger of this simple answer is that it may forestall our recognition of the equally important fact that not all mass communications are successful in affecting opinions, attitudes, knowledge, or behavior. The process of mass influence is far from

automatic, and the public's role in this process far from passive.[1]

Thus, all light shed on the question of when the media has an impact, and in what circumstances, and through what processes, is of importance to all interested in communications theory. But even in the short run this study may be deemed significant in that the findings will be of immediate value in the field of educational broadcasting, serving to outline specifically the results in terms of public attitudes and viewing behavior which might be expected to accrue from a systematic program of newspaper publicity.

Feasibility of the study.--Several factors contributed to enhance the chances for a successful investigation of the problem. The author, in his capacity as a graduate assistant in the Speech Department at the University of Oregon, was responsible for disseminating information regarding the educational television service to the local newspaper. Thus, measurement of this variable in the experimental design was facilitated.

In the matter of collecting the data the outlook was optimistic. Much of the information needed as a baseline from which to assess the amount of change produced by a newspaper campaign was available in raw form from the first interview conducted as part of the Oregon Educational Television Project.[1] The second wave of interviews was planned to follow the first after a one-year interval, thus allowing time to institute the experimental variable as well as incorporate into the schedule the questions which would measure its effect.

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[1] Charles R. Wright, Mass Communication--A Sociological Perspective (New York: Random House, 1959), pp. 100-101.

In processing the data, the author, as a Research Associate in the Department of Sociology, had ready access to all the necessary IBM statistical equipment.

The experimental design of the study was in itself quite simple. It was a matter of seeking relationships between reported levels of exposure to newspaper publicity concerning educational television and changes in attitudes and/or viewing behavior.

Definition of Terms.--Upon examination of the statement of the problem it is thought that the following expressions or terms need clarification:

Attitude: Attitude is here defined as an individual's reaction toward an object X (in this instance educational television), ". . . his predisposition to perform, perceive, think, and feel in relation to it."[2]

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[1] Supra, Chapter I, p. 9.

[2] Theodore M. Newcomb, Social Psychology (New York: The Dryden Press, 1950), p. 119.

Viewing Behavior: This study is concerned only with the one quantitative aspect of viewing behavior with regard to educational television, i.e., the amount of time devoted by the respondent to watching educational television.

Educational Television: Educational television as used in this study refers to programs of instruction, orientation, and cultural enrichment which are available in the Eugene-Springfield area over KOAC-TV. Programs of a similar nature which are available over commercial channels are excluded from the area of this study. Admittedly, this was an arbitrary decision, but it was thought to be essential to an orderly design if generally agreeable boundaries were to be drawn.

Effect: Effect in this instance refers to any objectively measurable change in overt viewing behavior or in reported attitudes toward educational television.

Review of the Literature.--Investigation of the literature in the fields of broadcasting, advertising, public relations, sociology, and social psychology has revealed very little that bears directly upon the problem of defining the relationships between repeated exposure to newspaper information on attitudes and/or viewing behavior with regard to educational television. Studies reporting on the effects of newspaper information seem to be concerned primarily with analyzing the flow of communication within the audience or with gross behavioral reactions to a specific, non-repeated stimulus. Studies reporting on attitudes and audience behavior with regard to broadcasting are primarily descriptive in nature, outlining the gross dimensions of such attitudes and behavior with little or no discussion of possible causal relationship between them and other areas of communication behavior. The overwhelming preponderance of research in educational television has been directed at assessing the value of the medium as a teaching aid in classroom presentation. A much smaller number of studies have concerned themselves with identifying the demographic and psychological characteristics of viewers and non-viewers of educational television. It was thought necessary to report only upon those studies that seem to bear a significant relationship to this one. Further, it was thought necessary to report only upon the salient features of the studies involved.

A search of the literature reveals only two studies that bear directly on the present one. Sokol, in 1959, attempted to determine whether or not newspaper publicity concerning station WGBH-TV, Boston, was effective in increasing public awareness and usage of the educational television service. The sample was drawn from television households in Winchester, Massachusetts, an upper-middle class suburb of Boston. Publicity concerning the educational station consisted of two parts. Each week, for a period of six weeks, attention-getting advertisements were placed in the local weekly newspaper, and short, "newsy" articles concerning WGBH-TV appeared elsewhere in the issue. The articles discussed in greater detail one particular program which appeared in the advertisement and which was thought to have more than a normal appeal to a sizeable group of readers. Different portions of the sample population were interviewed before, during, and after the newspaper campaign. The findings showed no significant differences in awareness or identification of WGBH-TV between respondents who had been exposed to differing amounts of publicity. During this phase of the survey, no attempt was made to determine whether there was an increase in usage of WGBH-TV as a result of exposure to newspaper publicity. Thus, there remains the possibility that while no more of the audience were _aware_ of the educational television station following exposure to publicity, the campaign may have motivated those who were previously aware of WGBH-TV to increased consumption of its offerings.

However, in a follow-up interview, forty respondents who were interviewed prior to the campaign were recontacted to ascertain whether they had seen the publicity and whether they had increased their consumption of WGBH-TV programs. The findings were interpreted as showing no significant changes in viewing behavior with regard to educational television which could be accounted a result of the newspaper campaign.[1]

It should be noted that Sokol's study differs from the present research in several important respects. First, the newspaper publicity imposed as the experimental variable in the Boston study was manifestly persuasive--paid advertisements and exhortary "news" articles concerning the local educational television service. In contrast, the newspaper information concerning KOAC-TV used in the present study was primarily non-persuasive in nature. Second, Sokol's research encompassed an experimental period of six weeks, while the present research attempts to measure changes in the audience over a much longer period. Finally, it should be remembered that in the Boston study the subjects were exposed to the experimental variable only once each week, while the sample employed in the present study was exposed to the newspaper information concerning KOAC-TV as often as five times per week for the experimental period.

Shepherd, in 1961, analyzed the extent and content of newspaper publicity devoted to a particular educational television program series and attempted to determine the effectiveness of such publicity in promoting educational television viewing. The results of a coincidental telephone survey of 326 potential viewing homes in the Eugene-Springfield area raised several questions concerning the efficiency of this type of promotion and indicated the need for further study.[1]

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[1] Robert Sokol, "The Popularity of ETV in a Suburban Community," cited by Wilbur Schramm, The Impact of Educational TV, op. cit., p. 37.

While not so directly related to the present research as the two foregoing studies, it may be of interest to touch on a number of other studies in the area.

A study by Adams in 1956 aimed at identification of the characteristics of the educational television audience. Fifty viewers and fifty-eight non-viewers over eighteen years of age and living in the telephone homes of Carrboro, North Carolina, were interviewed. Every telephone household was interviewed, and viewers were selected on the basis of having viewed six or more educational television programs in the preceding two weeks. Non-viewers were selected from those who had viewed one or no program in the preceding two weeks. The study found that viewers were likely to read more, to listen often to music, to read more newspapers, and to seek out the serious informative programs on commercial television.[2]

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[1] John R. Shepherd, "Newspaper Publicity and Educational Television Viewing," Unpublished report, University of Oregon, 1961.

[2] J. S. Adams, "A Study of Viewers and Non-Viewers of Educational Television," cited by Wilbur Schramm, The Impact of Educational TV, op. cit., p. 36.

Myers reported from a 1958 study of 200 viewers and 200 non-viewers in Syracuse, New York, that educational television viewers were more likely to attend lectures and concerts, read more non-local newspapers and more serious items in newspapers generally, and to be more active in community organizations.[1]

Schramm's study of the educational television audience in the San Francisco Bay area in 1957 pointed out that the viewing of educational television seemed to go with more reading of books and of high-quality magazines and reading of editorials and public-affairs news in papers.[2]

Numerous other studies report essentially the same findings. It will be noted that while these studies demonstrate a relationship between attitudes and viewing behavior with regard to educational television, they do not define the nature of the relationship. More specifically, they do not state whether these are relationships of cause and effect or coincidence.

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[1] L. Myers, Jr., "Books and Ideas: The Impact of an Educational Television Program on Its Audience," cited by Wilbur Schramm, *The Impact of Educational TV*, *op. cit.*, p. 29.

[2] Wilbur Schramm, *The Audience for Educational Television in the San Francisco Bay Area* (Berkeley: University of California Press, 1957).

A number of research projects have been concerned with the effects of exposure to mass media information on attitudes and behavior. Notable among these are the study by Hyman and Sheatsley on the reasons why information campaigns fail,[1] and the study by Star and Hughes of a public-issue information program in Cincinnati.[2] Such studies are of value to the present investigation insofar as they furnish general guides for the evaluation of the effectiveness of varying types of mass media information in effecting changes in attitudes and behavior.

Other studies bear tangentally on the problem in that they attempt to relate newspaper reading to various demographic characteristics. Chief among these is the study by Schramm and White in 1949 which attempted to establish tentative indices for the relation of newspaper reading patterns to the age, education, and socio-economic status of readers.[3]

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[1] H. Hyman and P. Sheatsley, "Some Reasons Why Information Campaigns Fail," Public Opinion Quarterly, II (Fall, 1947), pp. 412-423.

[2] S. Star and H. Hughes, "Report on an Educational Campaign: The Cincinnati Plan for the United Nations," American Journal of Sociology, LV (January, 1950), pp. 389-400.

[3] Wilbur Schramm, David M. White, "Age, Education, and Economic Status as Factors in Newspaper Reading," Journalism Quarterly (June, 1949), pp. 329 ff.

CHAPTER III

METHOD, TECHNIQUES, AND PROCEDURES

This chapter aims at a detailed delineation of the experimental design followed in the course of the study. An effort will be made to list only the important developmental processes, but all of these.

Methods.--The method employed in this study is essentially experimental. It is based on J. S. Mill's Fifth Canon of scientific investigation:

> If a modification in the factors of one situation is accompanied by changes, item by item, in the variables in another situation, there may be present some causal relationship. (Of course, the relationship of cause and effect cannot be assumed. Nor can it be shown which phenomenon is the cause, except by trying to produce the one situation by means of the other.)[1]

An attempt was made to measure varying levels of exposure to newspaper information concerning educational television against levels of attitude and behavior directed toward educational television, in order to determine whether or not a rectilinear relationship existed. The Method of Concomitant Variations, as elaborated by Mill, is as follows:

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[1] Whitney, op. cit., p. 216.

> Whatever phenomenon varies in any manner whenever another phenomenon varies in some particular manner, is either a cause or an effect of that phenomenon, or is connected with it through some fact of causation.[1]

Corollary with experimental method is the need for controlling all variables except the one to be measured. This calls for a measure of control which, while readily attainable in the laboratories of the physical sciences, is much more difficult to achieve in the framework within which the social sciences must operate. As Centers puts it:

> Causal relationships between two given variables can be unequivocally asserted, if they can be asserted at all, only when by rigorous experimental techniques all variables, but that to which causal efficacy is to be attributed are held constant--and such control of variables is most difficult to achieve.[2]

In answer to this problem social scientists have developed standard techniques of survey research which, when carefully applied, allow standards of accuracy comparable to those possible in the laboratory situation. The present study adheres to one such standard technique as outlined by Hyman:

> The explanatory survey follows the model of the laboratory experiment with the fundamental difference that it attempts to represent this design in a natural setting. Instead of creating and manipulating the independent variables whose effect is to

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[1] Ibid.

[2] Richard Centers, The Psychology of Social Classes (Princeton: Princeton University Press, 1949), p. 162.

> be traced, the survey analyst must find in the natural setting instances of these factors. By measuring their presence and magnitude, their relationship to the phenomenon can be established in the course of the analysis. But since these variables are not created, but merely found in the natural setting, there is the great danger that a variety of other factors accompany them, and that respondents characterized by particular attributes may vary in other important respects. The influence of these other sources of variability must somehow be reduced. Otherwise any inference about the hypothesized cause may be shaky. The restriction of the universe which is covered and the design of the sample in the explanatory survey provides the basic technique by which other sources of variation in the phenomenon are excluded.[1]

Since the problem, as stated, is to determine the effect of exposure to newspaper information concerning educational television on attitudes and viewing behavior relative to educational television, it becomes obvious that before any further investigation can take place, the existence of a substantial amount of such information readily available to the respondent has to be demonstrated. Prior to the experimental period, i.e., before the first wave of interviews, little such information regarding KOAC-TV (the state educational station) was available in the newspapers received in the Eugene-Springfield area. The dominating paper in the area, The Eugene Register-Guard, carried a weekly schedule of KOAC-TV program fare in its Sunday edition, but did not reprint the schedule during the week. In addition, the paper occasionally mentioned one of the station's programs in its "Radio/TV Highlights" column, a regular feature of the paper in which selected programs felt by the reviewer to be of more than ordinary interest were briefly described and informally rated.

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[1] Herbert Hyman, Survey Design and Analysis (Glencoe, Illinois: The Free Press, 1955), p. 81.

During the experimental period between the first and second interviews, the amount of newspaper information concerning KOAC-TV increased substantially. The KOAC-TV program schedule began to appear in the week-day editions of the Register-Guard, and descriptions of KOAC-TV programs of general interest (i.e., non-classroom programs which had a strong local tie-in; programs featuring local personalities; "how to" programs, public affairs programs, and dramatic presentations) began to appear in the "Radio/TV Highlights" column of the paper.

Just how substantial this increase in newspaper coverage of KOAC-TV was may be seen in Table 1. The table provides a measure of the amount of information concerning KOAC-TV available on the radio/television page of the Register-Guard for sixteen randomly selected weeks covering a period from five months before the first interview to the time of the second interview. Two measures of the amount of information are provided: (1) the number of separate items on the page devoted to KOAC-TV or KOAC-TV programs during the sample week; and (2) the total number of column inches devoted to KOAC-TV or to KOAC-TV programs during the sample week.

TABLE 1

AMOUNT OF NEWSPAPER INFORMATION CONCERNING KOAC-TV FOR SIXTEEN SAMPLE WEEKS

First Interview ↓ (between weeks 5 and 6)

Week	1	2	3	4	5	6	7	8	9	10
Number of Times KOAC-TV Mentioned	1	2	1	1	1	8	3	7	5	NO KOAC BROAD-CAST
Column Inches Devoted to KOAC-TV	4.5	9	8	5	5	14	5	13.5	11	NO KOAC BROAD-CAST

Second Interview ↓ (between weeks 19 and 20)

Week	11	12	13	14	15	16	17	18	19	20
Number of Times KOAC-TV Mentioned	NO KOAC BROADCAST		2	7	4	12	7	8	7	
Column Inches Devoted to KOAC-TV	NO KOAC BROADCAST		17	34	15	21	24.5	20	24.5	

	Before Experimental Period	After Experimental Period
Average number of times KOAC-TV mentioned per week	1.2	6.3
Average column inches per week devoted to KOAC-TV	6.3	18.1

On the basis of the data presented in Table 1 it was decided that the level of newspaper information which obtained prior to the experimental period was low enough that its effect on the experimental situation could be assumed to be negligible. This was admittedly an arbitrary decision, but it was supported by two facts. First, the printing of the KOAC-TV program schedule only on Sunday (a day when KOAC-TV was not even on the air) left the reader three alternatives: (1) He could clip the schedule from the paper and save it for reference throughout the week; (2) he could trust to memory as to the time of selected KOAC-TV programs; (3) he could disregard the schedule completely since it gave him no information on which to make a decision which could be immediately implemented. It was felt that anyone who took the trouble to follow the first alternative was likely to be already so highly motivated to watch KOAC-TV and to seek out information concerning KOAC-TV programs that an increase in newspaper information would have little effect.

Second, while admittedly there is no sure evidence that the newspaper information printed prior to the experimental period had no impact, there is a definite suggestion that there was a radical increase in the amount of such information during the experimental period. As the data in Table 1 show, the number of mentions of KOAC-TV programs was almost six times greater during the experimental period than during the immediately preceding months, and the total column inches devoted to KOAC-TV increased three-fold.

The Sample.--The sample employed in this study consists of 329 persons drawn from the larger sample used in the study of resistances to educational television now being conducted at the University of Oregon. Therefore, it is deemed necessary to describe the characteristics of the larger sample. For a more detailed description, the reader is invited to examine the Oregon Educational Television Project's "Preliminary Report Number One."[1]

The original sample for the basic study noted above was drawn by selection of approximately every third name from a list of all non-business television cable subscribers in the Eugene-Springfield area. For the first wave of interviews 1,504 names were selected in this manner. From this group 1,024 completed and usable interviews were obtained. The sample for the second wave of interviews called for 479 reinterviews and 140 new interviews. The sample used in the present study is composed of the 329 persons who were interviewed at both times.

A brief consideration of the method used in selecting the sample for the larger study reveals a source of potential error. Limiting the sampling universe to those television viewers willing to pay the $5.00 monthly charge for the cable service laid open the possibility of a rather serious bias in the sample. One possibility was that the higher income groups of the community would be over-represented. The other was that the cable users were not so much the wealthy as the heavy or "addicted" users of television. An investigation of the data tends to support the first view (see Table 2). There is less certainty about the second, but it would appear from comparable data on two other samples that cable subscribers do not spend more time viewing television.

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[1] Oregon Educational Television's Project, "Preliminary Report No. One," op. cit.

Table 2

COMPARISON OF CABLE USERS AND AREA PROBABILITY SAMPLE
FOR THREE SELECTED AREAS

	Per Cent with Family Income of over $7,000	Per Cent With Some College Education	Per Cent Having White Collar Occupations	Per Cent 45 Years of Age or Older	Number in Each Sample
Eugene					
Cable Users	43	38	37	52	712
Random Sample	22	21	28	50	525
Willakenzie					
Cable Users	76	56	42	36	135
Random Sample	51	25	42	41	92
River Road					
Cable Users	57	36	30	40	125
Random Sample	25	21	30	50	73

There is, then, sufficient evidence to indicate that this basic sample is atypical, though on a dimension (social class, as measured by education and income) which may not be relevant. Such atypicality, however, does not necessarily render the findings of the study unreliable. As noted in the Television Project's Report Number One:

> It is not possible to explain away the atypicality of the cable subscribing television viewers: they _are_ wealthier _and_ better educated. We want to make the reader fully aware of the fact that in the paragraphs to follow we are not talking about the _average_ viewer in the average city, but about a specific type. This does not mean, however, that the relationships which we are reporting hold true only for this very limited group of people. We would argue that our findings have general value in explaining and understanding television behavior. That is, in similar studies carried out with different populations, the magnitude of the relationships or the absolute proportion of the sample doing one thing or another would probably vary, but the fact that a relationship existed would still hold true.[1]

There remained one other potential source of serious error. This was the possibility that the 329 respondents included in the present study differed markedly with respect to attitudes and behavior toward educational television from the 1,024 persons who made up the sample of the larger study. Accordingly, the two samples were compared on the bases of attitudes toward KOAC-TV at the time of the first interview, and consumption of educational television during the week prior to the first interview. The smaller sample proved virtually identical to the larger in both these critical areas. Thus, it may be predicted that the relationships suggested in this study would hold true generally for the entire sample of the educational television study, and with the limitations previously noted, for the population at large.

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[1] _Ibid_., p. 8.

The Instrument.--Data used in the present study were obtained through use of the personal interview method. Parten[1] notes five advantages for this method of collecting data:

> (1) This method usually yields a high rate of returns.
> (2) Information secured is likely to be more correct than that secured by other techniques since the interviewer can clear up seemingly inaccurate answers by explaining the question to the informant.
> (3) Visual material to which the respondent is to react can be presented.
> (4) Return visits to complete items on the schedule or to correct mistakes can usually be made, thus assuring a greater number of usable returns.
> (5) The language of the survey can be adapted to the ability or educational level of the person interviewed, making it comparatively easy to avoid misinterpretations or misleading questions.

A schedule of approximately seventy questions was administered at each interview. The questions solicited information in four general areas:

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[1] Mildred E. Parten, Surveys, Polls, and Samples (New York: Harper and Brothers, 1950), pp. 79, 80.

(1) Demographic data: This section included questions dealing with such characteristics as age, sex, size of family, occupation, education, etc.
(2) Value Patterns: These questions aimed at determining the respondent's attitudes toward education, educational television, and television generally.
(3) Behavior Patterns: Questions were concerned with amount of general television viewing, amount of educational television viewing, behavior with regard to other types of communication, and amount of participation in cultural activities.
(4) Patterns of decision-making with regard to television viewing: questions aimed at determining who made the decisions as to what programs to watch, how such decisions were reached, and how they were implemented.

The length of time necessary to administer this schedule varied from one-half hour to one and one-half hours for the first interview, and one-half hour to one hour for the reinterview.

Techniques of Data Collection.--For the first wave of interviews the list of names comprising the sample was turned over to a reputable survey research organization under contract to the University. This contract called for at least 1,000 completed interviews with approximately half of the respondents to be men. Naming the University as sponsor, all of the interviewing was completed in the period from February 23 to March 8, 1960, with a total of 1,024 edited and verified interviews turned over to the project. Follow-up procedures, using the talents of a more experienced and professional interviewer to obtain basic information from formerly unobtainable not-at-homes and refusers, determined that little difference existed between the sample and the follow-up in terms of attitudes and behavior toward television generally and educational television in particular. The second wave of interviews was conducted during the latter part of April, 1961, using graduate students from the departments of sociology, political science, anthropology, and speech, as interviewers. This phase of the study yielded 469 completed and verified interviews.

Technique of Measuring Usage of ETV.--The Oregon Educational Television Project employed simultaneously several differently constituted measurements of educational television consumption, hoping to be able to evaluate each on the basis of its relationships with the others.

In order to maintain continuity with the many informative studies whose results had already been published, an openly subjective estimate measure of educational viewing of the "I watch regularly-occasionally-never" type was used.

An aided-recall technique designed to elicit precise details about the respondent's recent viewing behavior was developed in which the subject was given a listing of all programs shown on all stations received through the cable during the previous week and asked to check off those which he or she had watched. This technique, while costly to administer, seemed undeniably straight-forward and free at least of semantic distortions.

A third measure of educational television consumption was included in a battery of seven-point "semantic differential" items which provided the respondent with a greater number of gradations between extremes than the first measure noted above and offered an opportunity for avoiding a determinate answer by way of the mid-point and an offered "no answer" category.

Finally, as a check on the accuracy and precision of these three indices, the results were compared with those obtained by an independent commercial rating firm which had surveyed the local audience during the same period in which the Educational Television Project interviewers were in the field.[1]

Upon evaluation of the three measures of educational television usage by the project staff, it was concluded that the aided-recall technique described above provided the most sensitive and accurate measure of educational television consumption.[2] On that basis, this measurement of educational television usage was selected for the present study.

Technique of Measuring Evaluation of KOAC-TV.--The plan of the larger study incorporated a number of seven-point "semantic differential" items designed to throw light on the subject's attitude toward educational television: his own reaction to it; his estimate of "other peoples'" attitudes toward it; its importance in his daily life, etc. For the purposes of this study three of these items were selected as suitable determinants of the respondent's own evaluation of KOAC-TV. The respondent was asked to place himself along a seven-point scale with regard to the following: KOAC-TV: I like-dislike; KOAC-TV: Interesting-dull; KOAC-TV: Good-bad. These three particular scales are derived from one of the three major cognitive dimensions isolated by Osgood and his associates.[1] They designate this dimension, which was found to account for the greatest amount of variation in perception, the evaluative dimension. From the responses to these three items it was possible to construct an ordinal scale ranking the subject's evaluation of KOAC-TV from 0 (low evaluation) to 6 (high evaluation) at the time of the first interview and one year later at the second interview.

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[1] Oregon Educational Television Project, "Preliminary Report No. 4 (University of Oregon, 1961), (Mimeographed), Appendix.

[2] *Ibid.*, p. 36.

Technique of Measuring Exposure to Newspaper Information.--Three questions designed to measure exposure to newspaper information concerning educational television were incorporated into the schedule for the second wave of interviews. Each respondent was shown a photographic reproduction of the newspaper's radio/television page and asked how often he or she read this page of the paper, whether regularly-occasionally-never. Then, as the interviewer pointed in random order to the various sections of the page ("Radio/TV Highlights" column previously described; the syndicated television critic's column, which furnished after-the-fact reviews of selected programs; commercial radio and television schedules; and KOAC-TV program log) the respondent was asked to identify each section as one he or she read regularly, occasionally, or never. In those cases where a respondent did not voluntarily indicate his reading level for one of the key sections, the interviewer was instructed to inquire about the section directly, and the fact that a probe was necessary to determine the reading level was noted. Finally, responses were coded for each section of the page according to the reported frequency of readership and according to whether or not the interviewer had to probe for an answer.

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[1] Charles E. Osgood, George J. Suci, and Percy Tannenbaum, The Measurement of Meaning (Urbana, Illinois: University of Illinois Press, 1957), pp. 1-30.

Responses for the radio/television page as a whole, the "Highlights" section of the page, and the KOAC-TV program log were combined to form an index of exposure to newspaper information regarding KOAC-TV ranging from 0 (low exposure) to 6 (high exposure). A more detailed discussion of the construction of this index will be found in Chapter IV.

IV ANALYSIS OF THE DATA

Although the particular interest of this study lies in defining the effects of exposure to newspaper information concerning KOAC-TV on attitudes and viewing behavior, this variable was only one of several which were in operation during the experimental period. Thus, in order to achieve suitable control in the test situation it will be necessary in this section to deal in some detail with these other variables as well as with the experimental variable.

After brief consideration of the experimental problem it became evident that there were four elements of the test situation which could be expected to exert some influence on attitudes and viewing behavior with regard to KOAC-TV. First, the respondent's level of exposure to the newspaper information previously described (the experimental variable of this study) might be expected to have some effect on his educational television attitudes and behavior. Second, there was the possibility that the experience of the first interview itself had "sensitized" the respondent to KOAC-TV, and that this increased awareness of the existence of the station had led to some change in attitudes and/or behavior with respect to KOAC-TV. The third variable in the test situation which had to be considered was the possible effect of the direct-mail appeals employed in another part of the Educational Television Project Study. The effect of these appeals, which are described in detail in a previous report,[1] was of vital concern to this investigation since they were specifically designed to change the respondent's attitudes and behavior with regard to KOAC-TV.

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[1] M. N. Goldstein and J. R. Shepherd, " An Experiment in Increasing the Audience for Educational Television," Preliminary Report Number Five, Educational Television Project, University of Oregon, Eugene, 1962 (multilithed)

The fourth and final element of the experimental situation to be taken into account was the period of time which had elapsed between the first and second interviews (T_1 and T_2). The effect of maturation or normal growth, plus a congery of unmeasured historical events over this one-year period will have to be discussed, and where necessary, interpreted.

The basic problem in analysis, therefore, was to isolate the effect of each of these variables on changes in attitudes and behavior toward KOAC-TV, and to determine the nature and extent of interaction among them. In order to accomplish this the sample was divided into groups according to exposure to one or more of the four variables of the test situation.

> Group I consisted of 81 respondents who were interviewed at both times but who were not exposed to the direct-mail appeals previously described.
>
> Group II consisted of 248 respondents who were interviewed at both times and who received the direct-mail appeals.
>
> Group III consisted of 34 respondents who were interviewed at T_2 only and did not receive the mailed appeals.
>
> Group IV consisted of 63 respondents who were interviewed at T_2 only and received the mailings.

The respondents in each of these basic groups were ranked according to their reported exposure to newspaper publicity concerning KOAC-TV. Thus, within each group those respondents who reported little or no newspaper exposure served as a control for those who reported high exposure.

Finally, all respondents in the sample were presumed to have been affected to a similar degree by events outside the range of this study which might have occurred during the one-year interval between observations. Such events as changed programming policies of commercial networks leading to more "educational" shows on commercial channels are generally classified as unanticipated "historical" events which nevertheless can be controlled by the experimental design employed in this study. It may also have been the case that there was continuing between the two time periods a process which began before the first period, specifically, a trend toward more favorable evaluation of educational programs. In that this trend would find reinforcement for its growth from itself it might be called "maturation".

With these divisions within the sample firmly established, it was possible to move on to an analysis of the data itself.

In attempting to determine whether or not there had occurred any changes in attitude toward KOAC-TV within the sample it was first necessary to set up some method of measuring the respondents' evaluation of KOAC-TV both before and after the experimental period. Three independent but related measures of the respondents' evaluation of KOAC-TV were furnished by three items of the semantic differential type developed by Osgood, et al. These items, which were incorporated into the schedules for both the first and second wave of interviews, were presented to the respondent in the following form:

CABLE 4, CHANNEL 7, KOAC:

Good	3	2	1	0	1	2	3	Bad
I Like	3	2	1	0	1	2	3	I Dislike
Interesting	3	2	1	0	1	2	3	Dull

On the basis of the responses to these three items, it was possible to construct a Likert-type ordinal scale ranking the respondent's evaluation of KOAC-TV from 0 (low evaluation) to 6 (high evaluation) as shown in Tables 1a and 1b.

Table 2 presents a comparison in simplified form of the data in the previous tables. A cursory glance at the table reveals a dramatic shift in the respondents' evaluation of KOAC-TV from the time of the first interview to the second interview

TABLE 1a

INDEX OF KOAC-TV EVALUATION-FIRST INTERVIEW

	Good 3,2,1			Neutral 0, No Answer			Bad 1,2,3		
	Like 3,2,1	Neutral 0, NA	Dislike 1,2,3	Like 3,2,1	Neutral 0, NA	Dislike 1,2,3	Like 3,2,1	Neutral 0, NA	Dislike 1,2,3
Interesting 3,2,1	(91) 6	(25) 5	(4) 4	(4) 5	(2) 4	(0) 3	(1) 4	(0) 3	(0) 2
Neutral 0, No Answer	(2) 5	(4) 4	(1) 3	(3) 4	(157) 3	(3) 2	(0) 3	(0) 2	(0) 1
Dull 1,2,3	(4) 4	(5) 3	(3) 2	(2) 3	(6) 2	(3) 1	(0) 2	(0) 1	(5) 0

Index Score	Frequency	Per Cent of Total
0 (low evaluation)	5	2
1	3	1
2	12	4
3	165	50
4	21	6
5	31	10
6 (high evaluation)	91	28
	329	

Key

Frequency...(8)

5.....Index Score

TABLE 1b

INDEX OF KOAC-TV EVALUATION-SECOND INTERVIEW

	Good 3,2,1			Neutral 0, No Answer			Bad 1,2,3		
	Like 3,2, 1	Neutral 0, NA	Dislike 1,2, 3	Like 3,2, 1	Neutral 0, NA	Dislike 1,2, 3	Like 3,2, 1	Neutral 0, NA	Dislike 1,2, 3
Entertaining 3,2,1	(147) 6	(28) 5	(2) 4	(5) 5	(2) 4	(0) 3	(0) 4	(0) 3	(0) 2
Neutral 0, No Answer	(18) 5	(15) 4	(0) 3	(6) 4	(75) 3	(0) 2	(0) 3	(1) 2	(0) 1
Dull 1,2,3	(6) 4	(8) 3	(0) 2	(3) 3	(3) 2	(6) 1	(0) 2	(0) 1	(5) 0

Index Score	Frequency	Per Cent of Total
0 (low evaluation)	5	2
1	6	2
2	4	1
3	86	25
4	31	10
5	51	15
6 (high evaluation)	146	44
	329	

Key

Frequency...(8)

5.... Index Score

one year later. The number of subjects who placed KOAC-TV in the two highest evaluation ranks rose from 37 percent to 60 percent.

Table 2: Evaluation of KOAC-TV at First Interview Vs Evaluation at Second Interview

	Low Evaluation		High Evaluation		Number
First Interview (T_1)	206/329	63%	123/329	37%	329
Second Interview (T_2)	132/329	40%	197/329	60%	329

What caused this marked change in attitude toward KOAC? Four possibilities present themselves. First, the change may have been directly due to the increased newspaper coverage of KOAC-TV programs (the experimental variable). Second, there was the possibility that exposure to the first interview had sensitized the respondents to KOAC-TV, leading them to a more favorable attitude toward the station. Third, the change in attitude might have been caused by the direct-mail appeals. Finally, the shift toward a more favorable evaluation of KOAC-TV might have been in part or in total the effect of history or simple maturation operating during the one-year interval between interviews.

Effect of exposure to Newspaper Information. In order to determine the effect of the experimental variable (exposure to newspaper information concerning KOAC-TV) it was first necessary to construct some means of measuring the degree of exposure. Three items were incorporated into the second questionnaire to provide a subjective-estimate measure of the subject's exposure to the experimental variable. From the responses to these items an ordinal scale similar to Table 1a and 1b was constructed which measured the subject's exposure to the experimental variable along a continuum from 0 (low exposure) to 6 (high exposure). Finally, the three items used in the scale were tested for unidimensionality using the Guttman technique. A coefficient of reproducibility of .95+ was obtained - well within the accepted range for the assumption of unidimensionality. This scale is presented as Table 3.

Prior to this analysis the question arose as to whether or not a direct relationship might be hypothesized between exposure to newspaper information and favorable changes in attitude toward KOAC-TV. As noted in Chapter Two, such a hypothesis would be in accordance with early theory on the effects of mass media propaganda on attitudes. As Table 4 illustrates, this hypothesis was not supported by the gross data for the whole sample. The table reveals no consistent or significant differences in attitude change between those respondents who reported high exposure to the experimental variable and those who reported less exposure. However, the data depicted in this table was drawn from the entire sample, and results might have been contaminated by the operation of one or more of the other three variables noted above. It was possible to arrive at some measurement of the "pure" effect of the experimental variable only by isolating those respondents who were not exposed to the mailed appeals and who were not previously interviewed, that is, the 34 respondents in Group III. By comparing this group (III) to the T_1 evaluation scores of a group equivalent in all respects (Group I) it was possible to arrive at a fair measure of the effect of the newspaper information on attitudes toward KOAC-TV. Table 5 shows such a comparison. As in the preceding table the data shows no consistent difference between those respondents who reported high exposure to newspaper information concerning KOAC-TV and those who reported less exposure.

Did this mean, then, that exposure to newspaper information regarding KOAC-TV had no effect on the subject's evaluation of the station? The data seemed to indicate that this variable could not function independently to produce changes in attitude, but there remained the possibility that it might do so in conjunction with some other variable.

TABLE 3

INDEX OF EXPOSURE TO NEWSPAPER INFORMATION - SECOND INTERVIEW

Radio/TV Page:	Regularly			Occasionally			Almost Never		
Radio/TV Highlights:	Reg.	Occ.	Never	Reg.	Occ.	Never	Reg.	Occ.	Never
KOAC-TV Schedule:									
Regularly	(44) 6	(5) 5	(0) 4	(0) 5	(0) 4	(0) 3	(0) 4	(0) 3	(0) 2
Occasionally	(60) 5	(18) 4	(4) 3	(4) 4	(13) 3	(0) 2	(0) 3	(24) 2	(0) 1
Never	(94) 4	(18) 3	(6) 2	(7) 3	(20) 2	(7) 1	(0) 2	(5) 1	(0) 0

Index Score	Frequency	Per Cent of Total
0 (low exposure)	0	0
1	5	2
2	57	17
3	42	13
4	116	35
5	65	19
6 (high exposure)	44	13
	329	

Key

Frequency . . . (8)

5. . . Index Score

TABLE 4

GROSS EFFECT OF EXPOSURE TO NEWSPAPER INFORMATION

EVALUATION OF KOAC-TV AT FIRST INTERVIEW (T_1) VS EVALUATION OF KOAC-TV
AT SECOND INTERVIEW (T_2) BY LEVEL OF EXPOSURE TO NEWSPAPER INFORMATION

FOR ENTIRE SAMPLE

Level of Exposure to Newspaper Information	N	First Interview Number and Percent Reporting High Evaluation of KOAC-TV		Second Interview Number and Percent Reporting High Evaluation of KOAC-TV		Net Change	
Low (0-3)	104	38/104	37%	61/104	59%	+23/104	22%
Medium (4)	116	38/116	33%	58/116	50%	+20/116	17%
High (5,6)	109	47/109	43%	76/109	70%	+29/109	27%
Total	329						

**

TABLE 5

"PURE" EFFECT OF EXPOSURE TO NEWSPAPER INFORMATION

EVALUATION OF KOAC-TV AT FIRST INTERVIEWS VS EVALUATION OF KOAC-TV
AT SECOND INTERVIEW BY LEVEL OF EXPOSURE TO NEWSPAPER INFORMATION
CONTROLLING ON EXPOSURE TO MAILED APPEALS & PREVIOUS INTERVIEW

Level of Exposure to Newspaper Info.	First Interview (Group I) Number & Percent Reporting High Evaluation of KOAC-TV		Second Interview (Group III) Number & Percent Reporting High Evaluation of KOAC-TV		Net Change
Low (1-3)	12/32	38%	8/11	73%	+35%
Medium (4)	8/29	28%	7/16	44%	- 16%
High (5,6)	9/20	45%	5/7	71%	+26%

Effect of Prior Interview. During the early stages of investigation the staff of the Educational Television Project recognized the possibility that the first interview might affect the respondent's later evaluation of KOAC-TV. Accordingly they isolated a part of the sample to be interviewed at T_2 only. (Groups III and IV) By comparing these respondents with the T_2 observations taken on a group which had been exposed to the previous interview, while controlling on the other variables, it was possible to measure the effect of the prior interview on evaluation of KOAC-TV.

As depicted in Table 6, the data revealed that the T_1 interview alone had, if anything, a slight negative effect on the respondent's later evaluation of KOAC-TV. That is, those respondents who were interviewed at T_1 but who reported low exposure to newspaper information did not experience as great a change in attitude toward KOAC-TV as those respondents who were not exposed to the T_1 interview. When the table is expanded to include those respondents who report medium or high exposure to newspaper information concerning the station, the negative change in attitude reported for the low exposure subjects disappears, thus demonstrating the favorable impact made by newspaper information in an otherwise unfavorable atmosphere.

It must be stressed that while the data would seem to suggest a relationship here, there is simply not enough evidence either to confirm or deny its existence. The difference in attitude change noted above is not great and may be due to chance. Certain data uncovered later in the study seems to offer at least inferential corroboration of the existence of this relationship, but at this point the safest course is to conclude that the T_1 interview had no great effect upon later evaluation of KOAC-TV.

Effect of the Mailed Appeals. In order to determine the effect of the mailed appeals on attitude toward KOAC-TV, it was necessary to eliminate any effect of the other variables. Accordingly, four groups were selected from the sample.

TABLE 6

PURE EFFECT OF PRIOR INTERVIEW
EVALUATION OF KOAC-TV AT FIRST INTERVIEW (T_1) VS EVALUATION OF KOAC-TV AT SECOND INTERVIEW (T_2) FOR SUBJECTS EXPOSED TO PREVIOUS INTERVIEW AND SUBJECTS NOT EXPOSED TO PRIOR INTERVIEW

Level of Exposure to Newspaper Info.	First Interview (Group I) (T_1) Number and Percent Reporting High Evaluation of KOAC-TV		Second Interview (Group I) (T_2) Number and Percent Reporting High Evaluation of KOAC-TV		Second Interview Only (Group III) Number and Percent Reporting High Evaluation of KOAC-TV		Difference (T_2-T_1)-(T_2 only -T_1)
Low (1-3)	12/32	38%	16/32	50%	8/11	73%	- 23%
Medium (4)	8/29	28%	14/29	48%	7/16	44%	+ 04%
High (5,6)	9/20	45%	14/20	70%	5/7	71%	-01%

A control group which was interviewed at T_1 (Group I) and an equivalent control group interviewed at T_2 only (Group III) were compared with an experimental group interviewed at T_1 (Group II) and its T_2 equivalent (Group IV). Since each of these groups was interviewed only once, precluding any effect of a previous interview, and level of exposure to newspaper information was controlled, any difference in the amount of change exhibited by the control and experimental groups was attributable to the effect of the mailed appeals. The results are shown as Table 7. A careful study of the data reveals that the mailings actually had a negative effect on change of evaluation of KOAC-TV for respondents who reported limited exposure to newspaper information regarding KOAC-TV. Only those respondents who reported high exposure to the newspaper variable and received the mailings were positively affected, indicating strong interaction between these two variables.

In the face of the data just presented it must be concluded that the marked and favorable change in attitude toward KOAC-TV noted earlier is almost entirely the result of maturation and history in the one-year period between interviews. Indeed, no other explanation seems plausible. The other variables - exposure to newspaper information regarding KOAC-TV, the fact of prior interviewing, and exposure to the mailed appeals used in the ETV Project - all have demonstrated no effect, or a negative one, on evaluation. Only in the case of those respondents who received the mailed appeals and reported high exposure to the newspaper information was there any substantial and consistent gain beyond that attributable to maturation and history.

Earlier, history was loosely defined for the purposes of this study as encompassing all events and circumstances outside the range of this study occurring during the one-year interval between interviews which may have had some effect on changes in attitudes and/or behavior with regard to KOAC-TV. At this point it seems proper to speculate briefly on what some of these external events may have been and how they may have influenced the attitudes of the sample.

TABLE 7

EFFECT OF MAILED APPEALS ON KOAC-TV EVALUATION AT FIRST AND SECOND INTERVIEW FOR SUBJECTS WHO RECEIVED MAILINGS (EXPERIMENTAL GROUPS II AND IV) VS SUBJECTS NOT EXPOSED TO THE MAILED APPEALS (CONTROL GROUPS I AND III) BY LEVEL OF EXPOSURE TO NEWSPAPER INFORMATION

NUMBER AND PERCENTAGE OF EACH GROUP REPORTING HIGH EVALUATION

	CONTROL GROUPS					EXPERIMENTAL GROUPS					
Level of Exp. to Newspaper Information	First Interview (Group I)		Second Interview Only (Group III)		Change over Time (Group III-I)	First Interview (Group II)		Second Interview Only (Group IV)		Change over Time (Group IV-II)	Net Change due to Experiment (IV-II)-(III-I)
	N	%	N	%		N	%	N	%		
Low	12/32	38%	8/11	73%	+ 35%	26/72	36%	10/20	50%	+ 14%	-21%
Medium	8/29	28%	7/16	44%	+ 16%	30/89	34%	10/26	38%	+ 04%	-12%
High	9/20	45%	5/7	71%	+ 26%	38/89	43%	17/17	100%	+ 57%	+31%

The period between the first and second observations of the sample seemed to be one of increasing awareness on the part of the general public of the problems of education. The mass media devoted considerable time and space to discussion of these problems and possible solutions to them. Almost inevitably some of this discussion dealt in some fashion with educational television. Even when educational television was not mentioned specifically it might be speculated that in the public mind there probably existed some sort of tenuous linkage between educational television and education in general. Given this vague association it seems reasonable to assume that increased awareness of the problems of education would tend to produce as a "fringe" effect an increased awarness of educational television. And if the general concept of "education" was indeed one loaded with favorable connotations then it might be expected that heightened awareness would lead to increasingly favorable attitudes toward anything associated with it - in this case educational television.

Secondly it must be remembered that shortly before the time of the first interview the commercial television networks had found themselves the target of some very unfavorable public reaction to their programming practices. Thus during the experimental period of this study the networks were busily reshaping their program policies in an effort to win back public esteem. The most notable (and most publicized) result of this activity was an increase in the amount of network time devoted to information-type programs - "in-depth" news coverage, documentaries, etc. - the very type of program that had been the province of the educational station. In the absence of extensive content analysis of commercial television programs during the experimental period it is impossible to say to what extent the networks' change of policy resulted in a duplication of the non-commercial service, but it may be speculated that if there was in fact a substantial increase in "educational" programs over the commercial channels and if these programs were favorably received, then one might expect that one of the consequences would be a greater awareness and more favorable reaction to this type of program wherever found.

Finally there remains the possibility that, independent of any effect of events and circumstances occurring during the experimental period, there may have been a general trend, originating before the time of the first measurement and sustained through the time of the second interview, toward a more favorable evaluation of educational television in general and KOAC-TV in particular.

Relationship between Evaluation and Usage. Prior to this study it was hypothesized that there would exist a positive relationship between the respondent's evaluation of KOAC-TV and utilization of the station's program offerings: i.e., the person who reported a high evaluation of KOAC-TV would also be more likely to report having watched one or more of the station's programs during any given week. To check this hypothesis, Table 8 was constructed showing the relationship between evaluation of KOAC-TV at T_1 and the amount of KOAC-TV (T_1) watched. The table shows that of the 206 respondents (63% of the sample) who reported a low or neutral evaluation of KOAC-TV, 21 watched one or more half/hour units of KOAC-TV during the week prior to the first interview, for a total of 42 units watched. Of the 123 respondents (37% of the sample) who gave KOAC-TV a high rating, 25 watched one or more half/hour units of KOAC-TV during the one-week period, for a total of 76 units watched. In other words, a respondent who gave KOAC-TV a high rating was twice as likely to report having watched a KOAC-TV program during the test week than a respondent who gave the satation a low or neutral rating, and he was even more likely to be a heavy viewer.

Thus, the previous assumption of a positive relationship between evaluation of KOAC-TV and KOAC-TV usage would seem to be supported by the data. The discrepancy between the number of people who gave KOAC-TV a high rating and the number who actually watched any KOAC-TV programs may be attributed to a number of causes. The members of the Television Project in their investigation of this phenomenon report a number of external factors, primarily the unfavorable evaluations of other members

TABLE 8

KOAC-TV USAGE IN HALF-HOUR UNITS BY EVALUATION SCORE AT FIRST INTERVIEW

Evaluation Score T_1		KOAC-TV USAGE IN HALF-HOUR UNITS													
		0	1	2	3	4	5	6	7	8	9	10	11	12	13
0	Low	4		1											
1		3													
2		12													
3	Neutral	150	5	4	2	2		1	1						
4		16	1	1	2								1		
5	High	28	2	1											
6		70	8	3	5	1	2			1	1			1	

2

of the televiewing family, which commonly come into play to prevent those holding favorable attitudes toward educational television from watching the educational station's offerings. Nevertheless, it seemed likely in view of this demonstrated relationship that the substantial rise in evaluation of KOAC-TV noted at the beginning of the chapter would be reflected in increased consumption of the station's programs. As Table 9 illustrates, such was the case.

It was previously demonstrated that the rise in evaluation of KOAC-TV could be attributed largely to causes outside the range of this study. Was this also the explanation for the trend toward increased usage of the station's offerings? Or was this increase due to one or more of the other variables here discussed? Again it was necessary to investigate the effect of each of the separate variables and the amount of interaction between them.

Effect of Exposure to Newspaper Information. A measure of the "pure" effect of exposure to newspaper information on KOAC-TV usage was derived by comparing the T_1 measurement of Group I (81 respondents) with Group III (34 respondents). Neither group was exposed to a prior interview, and neither group received the mailed appeals, precluding the danger of contamination. As Table 10 illustrates, there was a sharp decline in KOAC-TV usage among those respondents who were not exposed to the T_1 interview and who did not receive the mailings. The important fact to be noted, however, is that this decline was greatest where exposure to newspaper information was least. In other words, as exposure to the newspaper information increased, the amount of decline in KOAC-TV usage decreased in a consistent and measurable fashion. Still to be explained, however, was the fact noted in Table 9 of a general increase in usage.

Effect of Prior Interview. A measure of the effect of the T_1 interview on later usage of KOAC-TV was achieved by comparing the T_2 usage scores of those respondents who were interviewed at T_1 but did not receive the mailed appeals

TABLE 9

KOAC--TV USAGE IN HALF-HOUR UNITS FOR FIRST AND SECOND INTERVIEWS (T_1 and T_2) FOR ENTIRE SAMPLE*

	Total Units Watched	Average Units Per Person	N
First Interview (T_1)	136	.41	329
Second Interview (T_2)	253	.77	329

*for 329 individuals

TABLE 10

PURE EFFECT OF EXPOSURE TO NEWSPAPER INFORMATION ON KOAC-TV USAGE

KOAC-TV USAGE AT FIRST INTERVIEW VS USAGE AT SECOND INTERVIEW BY LEVEL OF EXPOSURE TO NEWSPAPER INFORMATION; CONTROLLING ON EXPOSURE TO MAILED APPEALS AND PREVIOUS INTERVIEW

Level of Expósure to Newspaper Information	First Interview (Group I) Units Watched and Average Units per Person		Second Interview Only (Group III) Units Watched and Average Units per Person		Net Change in Average Units per Person
Low (1-3)	20/32	.62	1/11	.09	-.53
Medium (4)	6/29	.21	1/16	.06	-.15
High (5,6)	10/20	.50	3/7	.43	-.07

(Group I- 81 respondents) with the T_2 scores of those who did not receive the mailings and were not interviewed at T_1 (Group III- 34 respondents), while controlling on exposure to newspaper information. As the data in Table 11 reveals, exposure to the T_1 interview alone produced no effect on later usage of KOAC-TV. The decline in KOAC usage remained constant whether or not the respondents were interviewed at T_1. Again, the only difference noted was that which occurred as a result of differing levels of exposure to newspaper information.

Effect of Mailed Appeals. In order to determine the effect of the mailed appeals on KOAC-TV usage it was necessary once again to eliminate any effect of the other variables. Accordingly, four groups were selected from the sample. A control group which was interviewed at T_1 (Group I) and the equivalent control group interviewed at T_2 only (Group III) were compared with an experimental group interviewed at T_1 (Group II) and its T_2 only equivalent (Group IV). Contamination from the other variables was precluded by the fact that each of these groups was interviewed only once, and exposure to the newspaper variable was controlled. Therefore any difference in the amount of change exhibited between the control and experimental groups was attributable to the effect of the mailed appeals. The results are shown as Table 12. As the data illustrates, there is again a general decline in KOAC-TV usage, but under the impact of the mailed appeals this decline is sharply reduced. The most dramatic impact on the general decline is found among those respondents who report no exposure to newspaper information. This follows logically since those respondents reporting high exposure to newspaper information showed far less decline in usage in the first place.

In the face of the above data, then, how is it possible to account for the increase in KOAC-TV usage noted for the entire sample? The answer seems to be that this increase depends on interaction between the three variables - exposure to

TABLE 11

PURE EFFECT OF PRIOR INTERVIEW ON KOAC-TV USAGE

KOAC-TV USAGE AT FIRST INTERVIEW VS KOAC-TV USAGE AT SECOND INTERVIEW FOR SUBJECTS EXPOSED TO PREVIOUS INTERVIEW AND SUBJECTS NOT EXPOSED TO PREVIOUS INTERVIEW

Level of Exposure to Newspaper Information	First Interview (Group I) Units Watched and Average Units per Person		Second Interview (Group I) Units Watched and Average Units per Person		Second Interview Only (Group III) Units Watched and Average Units per Person		Difference $(T_2 - T_1)$ - $(T_2$ only - $T_1)$
Low (1-3)	20/32	.62	1/32	.03	1/11	.09	.06
Medium (4)	6/29	.21	1/29	.03	1/16	.06	.03
High (5,6)	10/20	.50	9/20	.45	3/7	.43	- .02

TABLE 12

EFFECT OF MAILED APPEALS ON KOAC-TV USAGE

KOAC-TV USAGE AT FIRST AND SECOND INTERVIEW FOR SUBJECTS WHO RECEIVED MAILINGS (EXPERIMENTAL GROUPS II & IV) VS SUBJECTS NOT EXPOSED TO THE MAILED APPEALS (CONTROL GROUPS I & III): BY LEVEL OF EXPOSURE TO NEWSPAPER INFORMATION

	CONTROL GROUPS					EXPERIMENTAL GROUPS					
	Units Watched & Average Units Per Person										
Level of Exposure to Newspaper Information	First Interview (Group I)		Second Interview Only (Group III)		Control Change (Group III-I)	First Interview (Group II)		Second Interview Only (Gr IV)		Experimental Change (GrIv-II)	Net Change due to Experiment (IV-II)-(III-I)
	Units	Avg	Units	Avg		Units	Avg	Units	Avg		
Low	20/32	.62	1/11	.09	-.53	30/72	.42	5/20	.25	-.17	+.36
Medium	6/29	.21	1/16	.06	-.15	19/87	.22	2/26	.08	-.14	+.01
High	10/20	.50	3/7	.43	-.07	49/89	.55	9/17	.53	-.02	+.05

newspaper information, exposure to the T_1 interview, and exposure to the mailed appeals - to counteract the tendency toward a general decline in KOAC-TV usage.

To demonstrate more clearly the nature and extent of this interaction the following simplified tables were constructed. In these tables change within the sample is portrayed in terms of the distance and direction of movement from the base change rate $T_1 - T_2$ which occurs when none of the variables is present. In this section of the tables, the base change rate is measured as -.53.

Table 13 shows the interaction effect when exposure to the T_1 interview is coupled with exposure to the mailed appeals. The data shows that while the T_1 interview has no effect by itself it has a powerful effect in conjunction with the mailed appeals, doubling the amount of change produced by the mailings alone. Reference to the figures reveals that while the general decline in KOAC-TV usage is reversed under the impact of these two variables in conjunction, the rate of positive change thus produced is still far below that noted for the entire sample in Table 9.

TABLE 13 -- INTERACTION BETWEEN EXPOSURE TO T_1 INTERVIEW AND MAILED APPEALS

Base Change KOAC Usage T1 to T2 (½ hr. units)	T_1 Interview Only Change T_1 to T_2 (½ hr. units)	Mail Appeals Only Change T_1 to T_2 (½ hr. units)	T_1 Interview and Mailed Appeals Change T_1 to T_2 (½ hr. units)
- .53	- .59	- .17	+ .19

Table 14 describes the interaction effect of exposure to the T_1 interview and exposure to newspaper information concerning KOAC-TV. As the data clearly indicates, there is little interaction between these two variables. Exposure to the newspaper information alone has nearly as much effect as exposure to the two variables together. Reference to the data shows a sharp reduction in the general decline in KOAC usage, but no positive change which might account for the general increase in usage depicted in Table 9.

TABLE 14 - INTERACTION BETWEEN EXPOSURE TO T_1 INTERVIEW AND NEWSPAPER INFORMATION

Base Change KOAC Usage T_1 to T_2 (½ hr units)	T_1 Interview Only Change T_1 to T_2 (½ hr. units)	Newspaper Only Change T_1 to T_2 (½ hr. units)	T_1 Interview and Newspaper Information Change T_1 to T_2 (½ hr. units)
- .53	- .59	- .07	- .05

Table 15 measures the interaction effect of exposure to newspaper information and exposure to the mailed appeals. The data shows a moderate amount of interaction between these two variables. Again the figures indicate that the general decline in KOAC-TV usage has been halted, but no positive change has occurred under the impact of these two variables.

TABLE 15 - INTERACTION BETWEEN EXPOSURE TO NEWSPAPER INFORMATION AND MAILED APPEALS

Base Change KOAC Usage T_1 to T_2 (½ hr units)	Mail Appeals Only Change T_1 to T_2 (½ hr. units)	Newspaper Only Change T_1 to T_2 (½ hr. units)	Mail Appeals and Newspaper Info. Change T_1 to T_2 (½ hr. units)
- .53	- .17	- .07	- .02

Table 16 shows the effect of exposure to all 3 variables - newspaper information, T_1 interview, and mailed appeals - on KOAC-TV usage. As the data reveals, there is a powerful interaction effect. Under the impact of the three variables in conjunction the decline in KOAC-TV usage is reversed, and the rate of positive change produced is three times as great as that noted in Table 9 for the entire sample - enough to counteract the tendency for decline in usage which occurs where one or more of the variables is missing.

TABLE 16 - INTERACTION BETWEEN MAILINGS, NEWSPAPER INFORMATION AND T_1 INTERVIEW

Base Change KOAC Usage	Newspaper and Mailings and T_1 Interview
- .53	+ 1.10

Impact of the test situation on relationship of evaluation to behavior. It has been shown (in Table 8) that in a static situation there exists a positive and consistent relationship between the respondent's evaluation of KOAC-TV and his utilization of the station's programs. That is, the respondent who reports a high evaluation of KOAC-TV is more likely to have watched one or more KOAC-TV programs during a specified week than a respondent who reports a low or neutral evaluation of the station, and he is more likely to be a heavy viewer.

What happens to this relationship when the situation is no longer static, but is changing under the impact of one or more of the test variables? If the relationship between evaluation and usage is a stable one, the data would reveal no difference between T_1 and T_2 in the percentage of viewers (respondents who watched one or more KOAC-TV programs) in each evaluation group, that is: while the number of persons in each evaluation category would increase, refelcting the overall trend toward higher evaluation of KOAC-TV at T_2, the proportion of viewers in each group would remain constant. As Table 17 illustrates, this is not the case. Under the impact of the test situation the percentage of viewers in the high evaluation category rises, while the proportion of viewers in the low and neutral evaluation groups remains unchanged. Not only is there an increase in the proportion of viewers in the high evaluation group, but there is a noticeable increase in the average number of programs watched per viewer.

Thus we are forced to the conclusion that the increase in evaluation between T_1 and T_2, regardless of its cause, does not itself directly stimulate any increase

TABLE 17

PROPORTION OF EACH EVALUATION CATEGORY WHO HAVE VIEWED AT LEAST ONE UNIT OF KOAC-TV DURING WEEK PRECEDING INTERVIEW ALONG WITH AVERAGE NUMBER OF KOAC-TV UNITS PER KOAC-TV VIEWER IN THE CATEGORY

EVALUATION	T_1		T_2		Change $T_2 - T_1$	
	Proportion viewing at least one unit of KOAC-TV	Average No. of units per KOAC-TV viewer	Proportion viewing at least one unit of KOAC-TV	Ave no. of units per KOAC-TV viewer	Proportion viewing at least one unit of KOAC-TV	Average No. of units per KOAC-TV viewer
Low	1/20 = 5%	*	1/15 = 7%	*	+ 2%	*
N	20/186 = 11%	3.0	13/117 = 11%	2.7	0	-0.3
High	25/123 = 20%	3.0	54/197 = 27%	4.0	+ 7%	+1.0

in the size of the viewing audience, but is associated with such an increase only in that more of the highest evaluation category are watching more educational television than before. The increase in evaluation, which the test variables can only partially account for, and then only when the two factors, newspaper exposure and mailed appeals are in interaction, has no significant impact upon increases in actual viewing aside from whatever it is that led a greater proportion of the high evaluators of KOAC-TV to actually choose to watch the station's programs. These are the questions which will be at the heart of the next chapter: What has stimulated those who were favorably predisposed toward KOAC-TV and who watched some KOAC-TV programs to increase their viewing? and what impelled those who were favorably disposed toward the station, but watched no KOAC-TV programs, to begin watching KOAC-TV?

V DIRECT IMPACT OF THE MASS MEDIA

Up to this point we have been content to analyze our data in the most straightforward fashion possible. In line with the original statement of the problem, our chief concern has been to determine whether or not any relationships exist between exposure to the local daily newspaper's television page and changes in ETV attitudes and behavior, without trying to explain how these relationships work. In this chapter we will attempt to explore the functional processes which seem to underlie the observed relationships and describe their theoretical implications.

To this end, a perhaps too hasty discussion of current theory regarding mass-media effect seems appropriate. For our purposes the body of communications theory dealing with the mass media may be roughly divided into two periods -- pre-World War II and post-war to the present.

Communications theorists before 1940 credited the mass media with an almost unbounded potency. As Katz and Lazarsfeld describe it:

> Their image, first of all, was of an atomistic mass of millions of readers, listeners and movie-goers prepared to receive the Message; and secondly, they pictured every Message as a direct and powerful stimulus to action which would elicit immediate response. In short, the media of communication were looked upon as a new kind of unifying force -- a simple kind of nervous system -- reaching out to every eye and ear, in a society characterized by an amorphous social organization and a paucity of interpersonal relations.[1]

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[1] Elihu Katz and Paul F. Lazarsfeld, Personal Influence (Glencoe: The Free Press, 1955) p. 16.

This elegantly simple scheme of things: the omnipotent media, on one hand, sending forth the message, and the atomized masses, on the other, waiting to receive it - and nothing in between, was gradually pulled apart as researchers began to uncover a host of intervening factors between the mass media stimulus and individual response. It became increasingly evident that such phenomena as value predispositions and the derived processes of selective exposure, selective perception and selective retention; groups and group norms; inter-personal dissemination of the contents of communications; the exercise of personal influence and opinion leadership; and the nature of the media in a free-enterprise society, while external to the communication itself, modified the anticipated effects of the communication. The early model of omnipotent media was discarded in favor of a new approach which viewed mass media as one among a series of factors working in patterned ways to produce audience effects. According to the new view, as expressed by Klapper: "Mass communication ordinarily does not serve as a necessary and sufficient cause of audience effect, but rather functions among and through a nexus of mediating factors and influences."[1]

Among the best known of the theoretical systems which are the outgrowth of this new approach to mass media influence is the "two-step flow" hypothesis first advanced by communications researchers engaged in the study of voting behavior. Using as a working hypothesis the pre-1940 belief that the media had a direct and immediate conversion effect on the reader - in this case the voter during a presidential campaign, Berelson, Lazarsfeld, and Gaudet found that the media played a role in changing an individual's voting intention only when the information the media intended to impart was personally carried to the voter by some other member of the community whom he could trust or respect. Direct exposure to the media was found to produce few changes, serving instead mainly to reinforce the individual's previously held opinions. The researchers found also that partisan voters exposed themselves primarily to that material which was flattering to the candidate of their choice. When adverse material was present they either did not perceive it or did not interpret it as threatening to their choice.

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[1] Joseph T. Klapper, The Effects of Mass Communications (Glencoe: The Free Press, 1960) p. 8.

In the followup analysis performed by Katz and Lazarsfeld, as reported in Personal Influence, some rigorous attempts were made to answer specifically those questions raised in The People's Choice. Using several areas of choice, not limiting themselves to political decisions as had the earlier work, they found as a widespread phenomenon the process which Berelson, et al, had labeled the "Two-Step Flow of Influence." The salient feature of this communications model was the finding that newspapers and other media most directly influenced "opinion leaders", who in turn influenced other members of the community, using in their arguments the information supplied by the media. The emphasis in Personal Influence was on changes (or conversions as Klapper terms them) in values or attitudes or preferences, abandoning for the time being the focus of the earlier study on the reinforcement effect and its implications. A less than careful reader could interpret their findings as suggesting that newspapers or other media had no effect other than that transmitted to the ultimate consumer by the "opinion leader". Indeed, Klapper notes that a good many commentators seem prone to overlook the fact that fully 58 per cent of the attitude/opinion/preference changes found in the Katz and Lazarsfeld studies were not attributable to personal influence. Returning to our own data for the moment, we have demonstrated that exposure to newspaper information can work directly to produce changes in behavior, even when the design of the study precludes the effect of personal influence produced by the signed, mailed appeals.

Thus we believe that the newspaper may have its greatest role to play in society directly, and not just in supplying rationals and articulations for "opinion leaders". Central to our view of the direct function of the newspaper is the following hypothesis and its corrollary. The hypothesis states that a newspaper, by and large, is accepted by its readers as reflecting the dominant values of the community in which it exists. That is, the newspaper tells the reader what values are currently held in the community, and to a certain extent, what factors militate for their acceptance by the reader or for their replacement by approved alternatives. Those readers who are not sure of their position on an issue may get some hints from the paper as to which of the approved alternatives to embrace, while those who are already fixed in their views will simply fail to perceive any material which might weaken their confidence. This is the familiar concept of "value reinforcement". This hypothesis seems to be generally supported by the many studies carried out in content and readership analysis. These studies find that indeed the newspaper usually purports to be the well-informed, non-partisan voice of prevailing public opinion, and that, except in certain "political" areas, this editorial stance is accepted by the paper's readers.[1]

The corrollary is less familiar. We feel, however, that in reflecting majority or dominant community values a newspaper at the same time supplies to its readers, as a latent function, information as to how widely shared are certain of his personal values. Here we are concerned with the existence of a state of "pluralistic ignorance" and the people who are its immediate victims - those persons who perceive themselves as holding deviant values. These are people who are relatively sure of their opinions but who are afraid to express them in overt behavior or even in demands for group action for fear of being noticeably out of step with the rest of the community. Their sense of isolation can be relieved only by some indication, in the mass media or elsewhere, that their beliefs are shared, even if not widely, by others in the community.

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[1] *Ibid.*, p. 104-106.

A recent instance of this condition, and one which illustrates nicely the kind of thing we are talking about is reported in an article in a national magazine. The article was written by two white southerners who were sympathetic to the national movement for desegregation but were afraid to speak out lest their friends and neighbors ostracize them, their business associates avoid them, their clubs expel them. These were people who knew where they stood, but were unsure of the risks of letting it be widely known. When they read that there were others in the white sector of their southern community who shared their views they were encouraged to express their opinions openly, no longer fearing that the vast array of informal sanctions available to the community might be brought to bear against them.

Something of the same phenomenon may be taking place regarding educational television viewing in the family. Many respondents, as we have shown, are sympathetic to KOAC-TV -- more of them then are actually viewing the station on anything like a regular basis. Some fail to watch KOAC-TV programs because, however strong their motivation for doing so, they cannot. Illness, heavy participation in community activities, working hours which conflict with the educational television schedule -- all may be sufficient to keep even a highly motivated person from watching educational television. But these reasons, and others like them, probably account for a very small percentage in the wide gap between those wholike educational television and those who actually watch KOAC-TV.

Research carried on by other members of the Oregon Educational Television Project has indicated that a major determinant of an individual's educational television behavior is the political atmosphere in the family and the ability of the individual to overcome political adversity where it exists.[1] Under these conditions the individual's perception of how closely his own values regarding educational television correspond with those of his fellows becomes of crucial importance. We would argue that other things (e.g., individual personality) being equal, the more reason an individual has for feeling that his own values are shared by others, the more likely he is to make open demands on the basis of these values. In other words, the person who is sympathetic toward educational television and feels that he has the support of others is more likely to express his preference for KOAC-TV programs as an open demand than the person who is equally sympathetic but who has no reason to believe that his preference is shared by others.

The individual is probably already well aware of the extent to which his views are likely to gain support among the members of his immediate television viewing circle, the family. If he is isolated in this group he is almost completely disarmed unless he knows that his values are supported by outsiders.[2]

It is at this point that the newspaper performs the function that we suggest in our hypothesis and its corrollary. By supplying the individual with information by which he can gauge the extent to which his own values are shared by other people outside the family group, the newspaper (and other mass media) can intensify or alleviate his sensed isolation, and thus inhibit or encourage the open expression of his values.

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[1] Robert S. Cahill, "Memo. NR. 41 to the Oregon Educational Television Project" University of Oregon, May, 1962.

[2] This is as true of nations as of families. The American communist is sustained not by the hope of revolution in this country, but by the world wide expansion of communism from its base in the Soviet Union. The belief that his creed will triumph, and that in any case, it is a major force in the world, gives him the courage he needs to speak out in a completely hostile society.

What evidence does the KOAC-TV sympathetic deviant have that there are people outside the family who support his position? Normally very little, if the data from Table I, Chapter 3 is kept in mind. Information concerning KOAC-TV in the newspaper was almost non-existent prior to the beginning of our experimental period. After the first interview there was a trebling of the amount of space devoted to KOAC-TV programs, and the number of KOAC-TV mentions increased six-fold. It should be stressed here that all mentions of KOAC-TV shown in Table I, Chapter 3 are from non-advertising space in the newspaper -- space which it must be presumed the newspaper values, if only because it could be sold for revenue. That this space is given over to KOAC-TV, instead of being sold for advertising, must imply one of two things to the reader: (1) enough other subscribers in the community are interested in information about KOAC-TV to demand its publication by the paper, or (2) the editors regard the publication of KOAC-TV information as a public service, which means that at least one important element in the community is favorable to educational television. In either case, the same point is made to the reader: heavy mention of KOAC-TV programs in the newspaper means that KOAC is being given correspondingly heavy support in the community at large.

If our reasoning is valid, then we can expect to find that those persons who are most doubtful about the social legitimacy of their views regarding educational television, i.e., those persons who are sympathetic toward ETV and believe that others are generally hostile, and who on top of this feel that their values are not shared by anyone else in their family circle, will be affected most directly by indications in the mass media that others share their views.

In order to test this hypothesis we first divided the respondents according to their initial belief that they were conforming or deviating from the dominant value position. This was accomplished by use of a simple semantic differential question which had at one extreme of the scale the alternative: "Most people like" and at the other extreme, the alternative: "Most people dislike." This item was presented to the respondent in the following form:

KOAC-TV

Most People Like 3 2 1 0 1 2 3 Most People Dislike

The response on this item was then compared to the response given on the semantic differential items which measured the respondent's personal evaluation of KOAC-TV (page 39). The comparison between these two items (I Like-Dislike/Most People Like-Dislike) yielded three possibilities. First, one could have the same score for both items, regardless of whether one was high or low in his personal evaluation of KOAC-TV. These people we lebeled "conformists".[1] The "Non-Conformists" could be either of two types - those who are more favorable to KOAC-TV than they believe the majority of people to be, and those who are less sympathetic. This first group we term the "sympathetic deviants", the latter group "hostile deviants."

It is significant to note that our respondents are accurate in their assessment of others, for there are practically no hostile deviants, only conformists and sympathetic deviants (Table 1). This seems to be the result

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[1] This statement is not meant to imply any dynamic, especially that usually attributed to conformists of sending out their radar beams in order to tap the opinion of the majority before making up their own mind. If the radar process is carried to its logical conclusion everybody is receiving and nobody is sending. Thus we would expect that some people, perhaps the majority, arrive at their opinions by other means than first assessing the relevant value positions of others.

TABLE 1

	N:
Sympathetic Deviant (I like KOAC-TV more than most)	83
Conformist	139
Hostile Deviant (I like KOAC-TV less than most)	17

of the perception widely held among our respondents that most people are either neutral toward KOAC-TV or dislike the station. It is hard to be more hostile than a generally hostile public; one can be only as hostile or less. It is the less hostile, or the sympathetic deviants, who are most in need of some information as to just how lonely they really are, especially if they are unable to muster support for their values within the family, and it is this group whom we would expect to be most affected by exposure to newspaper information concerning KOAC-TV. As the data in Table 2 shows, this is indeed the case. Almost half the sympathetic deviants who were exposed to the newspaper information concerning KOAC-TV increased their viewing of KOAC-TV programs, while the sympathetic deviants who were not exposed to the newspaper information, and the conformists, regardless of exposure, changed less.

TABLE 2

Percent Increase in KOAC-TV Viewing from T_1 to T_2

	No Newspaper Exposure	Some Newspaper Exposure	N
Sympathetic Deviants	11%	40%	83
Conformists	2%	22%	139

It should be remembered that the newspaper was not the only factor to play a role during the experimental period. There was the additional factor of a highly organized direct-mail campaign which was designed to accomplish three things: (1) to persuade the recipient of the worth of educational television,

(2) to inform him as to how he could avail himself of the programs of the local educational station, KOAC-TV, and (3) to provide him with arguments for KOAC-TV which he could use on other members of the family.

In general we expected, among other outcomes, that those who received the mailings arguing the advantages of educational television would be more favorably disposed toward KOAC-TV at the end of the ten-week mailing period. Therefore, in the tables that follow we distinguish between those respondents who did and did not receive the mailed propaganda.

There is some reason to believe that a conformist who received the mailed materials might change his attitude to one more favorable to the station, (see Table 7, Chapter 4) and thus become something of a deviant himself.[1] If this is the case, we might reasonably expect to find that the deviants who did not receive the stimulus of the mail campaign and the conformists who were exposed to the mailed propaganda would be similarly affected by exposure to newspaper information concerning KOAC-TV. A glance at Table 3 reveals that this is so. Both the conformists who received the mail treatment and the deviants who did not receive the treatment react identically to the stimulus of the newspaper campaign. In each case a quarter of those who were exposed to the newspaper information concerning KOAC-TV watch more KOAC-TV programs at T_2 than at T_1, while those who were not exposed to the newspaper information remain unchanged in their viewing habits. As we predicted, the conformists who did

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[1] As we shall see, the reverse is also possible; that is: the mailing might have produced in some who were previous to receiving the mailing already deviants the feeling that they were not so isolated after all, since there were enough people interested in educational television to send him unsolicited advertisements concerning KOAC-TV. Thus the mailed propaganda may have had, in addition to its anticipated conversion effect, some endorsement value for those who were already extreme believers.

TABLE 3

Percent Viewing More KOAC-TV at T_2 than at T_1

	Mailed Appeal	Newspaper endorsement No	Newspaper endorsement Yes	N
Sympathetic Deviant	Yes	21%	44%	64
	No	0%	25%	19
Conformist	Yes	3%	28%	105
	No	0%	0%	34

not undergo pressure to change their educational television values were not affected by exposure to the newspaper information.

The most fascinating group are the respondents who were deviants to begin with, and who on top of their previously formed inclination toward KOAC-TV received mailed materials personally addressed to them which urged them to view more educational television. Even when these people were not exposed to the newspaper information concerning KOAC-TV, their educational television viewing increased. Why is this? There are two possible explanations, neither of which can be conclusively accepted on the basis of our data alone. First, it is possible that the added stimulus of the mailed material increased their desire to watch KOAC-TV to the point where they no longer worried about the possible reactions of their fellows. In the face of this higher level of desire it no longer mattered that their open demands for educational television might be counted as deviant behavior and bring down on their heads all the informal sanctions available to the group. In a word, these people had become educational television fanatics who would demand to watch KOAC-TV whether or not their position was supported by some outside agency, such as the newspaper.

Less colorful, but more plausible is the second explanation. The mailings may have had more complex effects than we had anticipated, not only working to convert the respondent or to reinforce his previously held educational television attitudes, but also serving to inform the deviant that his educational television values were endorsed by some social force outside the family, and that he would not be entirely alone should he venture a demand for KOAC-TV programs. In this case, the deviant perceived the mailings alone as affording him enough endorsement for his values that he could give them open expression.

When these highly deviant individuals do become aware of the newspaper campaign, almost half (44%) of them show an increase in KOAC-TV viewing. This is a rather astounding rate of change - almost as if a dam had burst, releasing a flood of demands for KOAC-TV.

So far our analysis does not take into account the previously mentioned fact that some people are in greater need of outside support for their values than others. We have predicted that the individual isolated in a primary group hostile to educational television should display a greater rate of change in educational television viewing as a result of exposure to newspaper information than the man who finds himself with at least one other member of the family who endorses his position. Table 4 breaks the respondents down according to family support. Because of the small number involved, the conformists who received the mailed conversion treatment are combined with the deviants who did not. This leaves us with three categories: the conformists, the deviants, and the highly deviant or possible "fanatics".

The conformists, of course, needed no support, for they were happy with things the way they were. As expected their KOAC-TV viewing shows no change in either political situation. The fact that the deviants showed no greater tendency to change as a function of newspaper endorsement when they were most politically isolated comes as something of a surprise for which at the moment we have no answer. The "fanatics" who were supported did not change when the newspaper endorsement

TABLE 4 -- NUMBER AND PERCENT VIEWING MORE KOAC-TV AT T_2 THAN AT T_1

		Mailed Appeals	No Newspaper Exposure		Some Newspaper Exposure	
Some Family Support	Sympathetic Deviant	Yes	0/7 = 0%		7/24 = 29%	
		No	0/7	5%	1/7	25%
		Yes	1/14		9/33	
	Conformist	No	0/6 = 0%		0/8 = 0%	
No Family Support	Sympathetic Deviant	Yes	4/11 = 36%		10/17 = 59%	
		No	0/0	0%	1/3	28%
		Yes	0/13		10/37	
	Conformist	No	0/9 = 0%		0/9 = 0%	

was not forthcoming, possibly because whatever endorsement effect the mailing could have provided was preempted by the endorsement of the supportive family member. The unsupported "fanatics" clutch at any indication of support, and exposure to the mailed propaganda, even without the newspaper endorsement was sufficient for more than a third of them to increase their viewing of KOAC-TV -- a greater rate of change than that manifested by the supported "fanatics" who were exposed to the newspaper. As we expected, the most profound effect of the social endorsement supplied by the newspaper is shown by those people who are politically isolated in their relevant social group (the family in the case of television program selection) and who perceived most clearly the deviancy of their values. This strengthens our belief that the newspaper can play the direct role of endorsing those values their holders had assumed to be deviant. In most instances of persons believing themselves isolated the newspaper information that their values were more widely shared than they had suspected led to greater realization of formerly dormant values.

CONCLUSION

We have been dealing here with a single outcome -- educational television viewing behavior. But if we can view the family as a microcosmic political system and educational television behavior as a political act within that system, then we would argue that our findings have a heuristic value far beyond the realms we have specifically considered in this study.

The whole question of the effects of the mass media on individual action is rife with implications for those concerned with political behavior. We have tried to demonstrate that the mass media (in this case the newspaper) can have a direct effect on individual behavior. When the mass media stay within the boundaries accepted by the society in which they operate, they tend to inhibit change, and reinforce the prevailing values. When the mass media go beyond those boundaries, however, they can encourage changes in attitudes and behavior by legitimizing the discussion of new alternatives. It is little wonder, then, that those governments which most fear change are most concerned with controlling the channels of mass communication, for the mass media are the instruments by which a disaffected population may learn that, far from being the only legitimate social institution, the current government is merely the representative of one far from exclusive set of values.

So, where is the cause: attitude or behavior [illegible] interdetermined?

APPENDIX A

PHOTOGRAPHIC REPRODUCTION OF RADIO/TV PAGE OF THE EUGENE REGISTER-GUARD